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This is the August 2017 edition of the AIDSFree Prevention Update, an initiative of the Strengthening High Impact Interventions for an AIDS-free Generation (AIDSFree) Project. The AIDSFree Prevention Update is your monthly snapshot of current peer-reviewed literature and program resources, tools, and curricula on HIV prevention.

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A Practical Guide to Implementing Community-Based HIV-Prevention Services
Sex in the Shadow of HIV: A Systematic Review of Prevalence, Risk Factors, and Interventions to Reduce Sexual Risk-Taking among HIV-Positive Adolescents and Youth in Sub-Saharan Africa


This review examined sexually risky behaviors among HIV-positive youth and adolescents in sub-Saharan Africa, focusing on eight outcomes that included early sexual debut, irregular condom use, and age-disparate relationships. Findings from 35 studies showed overall high rates of unprotected sex and early sexual debut among HIV-positive youth and adolescents of all ages, and increased risky behaviors among those under 19 years of age in particular. Between one-third and one-half of youth and adolescents had an older partner at their first sexual encounter, and one-fifth reported participating in transactional sex. Nearly 75 percent of pregnancies were unplanned. Across most studies, one in ten participants reported at least two partners in the past year; men were much more likely to have multiple sexual partners than women. Prevalence of genital herpes and human papillomavirus was 50 and 88 percent, respectively. The authors said that high rates of sexually risky behaviors among youth indicate a need to integrate sexual and reproductive health services into HIV programs for youth and adolescents. Psychosocial services and combined interventions may reduce sexually risky behaviors. Policies and programs should take into account the unique needs of HIV-positive adolescents to prevent onward transmission.

View Full Study

HIV Pre-exposure Prophylaxis for Adolescents and Young Adults


This review described available evidence for the use of pre-exposure prophylaxis (PrEP) in the form of tenofovir disoproxil fumarate (TDF) and emtricitabine (FTC) among adolescents (<18 years old) and young adults (15–25 years old). A trial in South Africa among young women was stopped early because plasma levels showed that fewer than one-third of participants used PrEP. Three other randomized controlled trials found no difference between young adults and older adults in PrEP effectiveness, although adherence was lower among the younger group. Several additional studies have also demonstrated lower adherence among adolescents and young adults in comparison to their older counterparts. Studies have also shown that adherence declines over time as the frequency of clinic visits diminishes. Reduced adherence was attributed to a combination of developmental, psychosocial, socioeconomic, and structural factors. Concerns about the safety of PrEP in younger patients include the impact of TDF on bone mineral density (BMD), which is important among youth who are still developing. However, studies also show that BMD impacts can be reversed in those under age 25. Studies on risk compensation have yielded mixed results, underscoring the importance of patient counseling, adherence, and services for sexually transmitted infections. The studies revealed an interest in PrEP across young population groups. Challenges for PrEP use include lack of provider experience, cost, and issues surrounding consent.

View Abstract
Agenda 2030 For LGBTI Health and Well-Being


This review paper describes the relevance of the United Nations’ Sustainable Development Goal 3 (SDG 3), “Ensure Healthy Lives and Promote Well-Being for All at All Ages,” to lesbian, gay, bisexual, transgender, and intersex (LGBTI) populations. Since information on these populations is incomplete, the paper also describes the data needed to implement and monitor programs for LGBTI groups to achieve seven broad targets within SDG 3. Each chapter summarizes available data and data gaps for each target. The authors also highlight the importance of: 1) disaggregating data for LGBTI populations, 2) addressing human rights challenges, including the right to health, for LGBTI populations; 3) acknowledging that LGBTI health needs, experiences, and outcomes are diverse, and that there are neglected populations within this group; and 4) engaging LGBTI-led community organizations in planning, implementing, monitoring, and evaluating interventions. The review provides specific recommendations for each target. It also offers nine cross-cutting recommendations for advancing SDG 3 by improving the wellbeing of LGBTI individuals, including repealing laws that punish same-sex and transgender behaviors, banning nonconsensual medical procedures, equipping health care providers to provide services to LGBTI individuals, and funding organizations that reach LGBTI populations.

View Full Report
Pre-Exposure Prophylaxis for HIV Prevention in Women: Current Perspectives


This narrative review described evidence on pre-exposure prophylaxis (PrEP) among women, including adherence and barriers to effectiveness; and summarizes new PrEP administration modalities currently under study. Globally, multiple studies have demonstrated that tenofovir (TDF)-based PrEP is safe and effective among women who are adherent. However, women at risk for HIV often experience mental health challenges, substance use, and socioeconomic challenges, with negative impacts on adherence; and suboptimal adherence has a negative impact on PrEP efficacy. PrEP can be used intermittently among women who wish to become pregnant, and it is safe for breastfeeding women. Some studies have shown that TDF-based PrEP may result in small changes in kidney and liver function, as well as bone mineral density; one study found slight growth restriction among infants whose mothers took TDF during pregnancy. Contextually and culturally sensitive PrEP awareness campaigns that include community-based organizations may increase uptake. Intravaginal gel PrEP studies have demonstrated mixed results thus far; currently, a long-acting injectable PrEP is being studied. Future studies will examine efficacy of an intravaginal PrEP ring. The authors called for additional research on reaching minority populations to address racial disparities in the HIV epidemic.

View Full Study (PDF, 308 KB)

Awareness and Willingness to Use HIV Pre-Exposure Prophylaxis among Men Who Have Sex with Men in Low- and Middle-Income Countries: A Systematic Review and Meta-Analysis


The authors reviewed studies examining knowledge of and willingness to use pre-exposure prophylaxis (PrEP) among men who have sex with men (MSM). Analysis of 23 eligible studies involving 14,040 men yielded a 29.7 percent pooled awareness of PrEP. Four studies reported high awareness (61–73%) and nine reported low awareness (5–44%); studies in India and Peru found almost zero awareness. Principal sources of knowledge regarding PrEP included the internet, newspapers/magazines, friends, and clinicians. The estimated overall willingness to use PrEP was 64.4 percent, with variations between countries (19–96%); in six studies, fewer than half of MSM were willing to use it, and in five, more than 80 percent were willing. The authors described enablers and barriers on individual, social, and structural levels. Barriers included lack of PrEP awareness, lack of confidence in PrEP efficacy, fear of side effects, adherence requirements, stigma, and cost, among others. Enablers included awareness of PrEP, desire for intimacy with an HIV-positive partner, peer/partner/family support, history of sexually transmitted infections or use of post-exposure prophylaxis, and access to free or discounted PrEP. The authors concluded that education on PrEP is crucial, as once MSM become aware of PrEP they tend to be willing to use it if provided appropriate support.

View Full Study
What Influences Linkage to Care after Home-Based HIV Counseling and Testing?


This qualitative study examined factors that influenced linkage to care among 30 HIV-positive clients who were tested in a home-based HIV counseling and testing (HBHCT) approach in South Africa. The authors categorized findings into individual, relationship, community, and health system levels. In-depth interviews revealed that at the individual level, a client’s ability to cope influenced the time between diagnosis and linkage to care. Clients who linked directly to care accepted their diagnosis, and had sought testing because they believed that something was wrong with their health. At the relationship level, clients who lacked close personal relationships were more likely to delay care. Those who linked quickly to care described receiving strong emotional and financial support from their relationships. At the community level, poor clients, those living in rural areas, and those who were busy taking care of others or searching for jobs were more likely to delay care. At the health system level, long waiting times, being turned away, poor staff attitudes, supply shortages, and a break in client confidentiality presented barriers to care, including for those who did not experience barriers on any other level. The authors stressed the need to assess factors that influence linkage to care during HBHCT, including social support, personal motivations, and available resources. They also endorsed integrating monitoring of linkage to care into HBHCT services.

View Abstract

Integrating HIV and Substance Use Services: A Systematic Review


This systematic review examined global evidence from programs that integrated HIV care and substance use. Each of the 51 eligible studies were classified as one of three integration models:

- Model 1 comprised HIV facilities that integrated substance use services. The model was further broken down into three types of HIV services: services that integrated substance use assessments, those integrating substance use treatment, and those integrating substance use treatment and other services.
- Model 2 comprised substance use facilities that integrated HIV services, with subcategories of substance use services that integrated HIV screening and counseling, HIV treatment, and treatment of HIV and other illnesses.
- Model 3 included integration at facility types, such as other clinical settings, mobile clinics, or harm reduction sites.

The benefits of integration included increased ability to identify HIV and/or substance use and support treatment adherence; decreased likelihood of drug interactions; and reduced costs for clients. Challenges to integration included high service delivery costs, a higher provider training burden, and difficulties with implementing integration. Staff at substance use facilities expressed lack of confidence in administering HIV tests and delivering positive results to clients. The findings also showed linkages
to other community services also present challenges. The authors concluded that though more research is necessary, integrating HIV and substance abuse services confers benefits to patient and service outcomes.

**View Full Study**

**Technological Methods to Measure Adherence to Antiretroviral Therapy and Preexposure Prophylaxis**


This review summarized technologies for measuring adherence to antiretroviral treatment and pre-exposure prophylaxis (PrEP). The document includes:

- **Real-time electronic adherence monitors**, including electronic pill boxes, bottles, and blister packs, record and send opening time and date information to a central server via cellular network. Benefits include facilitating immediate intervention and enabling risk assessment for viral rebound. Challenges include under- and overestimation of adherence due to non-use or openings out of curiosity.

- **Digital medicine systems** comprise a sensor embedded within a pill that, when in contact with gastric acid, sends a message via Bluetooth® or radio frequency technology. No published data are available yet, though the technology has been deemed “moderately” acceptable in hypertension and schizophrenia studies.

- **Short message service surveys** have been used to determine self-reported adherence and related behaviors including sexual activity and perceived risk to determine if PrEP is being used to its maximum benefit. Cell phone access, shared cell phones, reading ability, and confidentiality are concerns, but recent studies found high rates of feasibility and acceptability.

- **Pharmacokinetic measures** quantify drug concentrations within various body tissues to measure drug concentrations. Feasibility, acceptability, and cost all present potential challenges to implementation.

The authors recommended considering these novel approaches in tandem with current evidence-informed approaches to measure adherence.

**View Abstract**

**Service Utilization and Cost of Implementing a Comprehensive HIV Prevention and Care Program among People Who Inject Drugs in Delhi, India**


This article described service uptake during a study of 3,774 people who inject drugs (PWID), and the costs associated with a comprehensive package of HIV prevention, care, and treatment services. The comprehensive package, implemented between 2011 and 2014 in Delhi, India, included HIV and hepatitis B and C virus (HBV, HCV) counseling and testing, treatment of sexually transmitted infections, clean needles and syringes, condoms, wound care, bathing facilities, and education. Referrals for HIV and TB treatment, opioid substitution therapy, and substance rehabilitation also were provided. The
The program provided 7,334 HIV tests. Nutrition services were provided for 3,494 participants and wound care to 1,219; however, only 692 continued care until wound healing was complete. Of 2,331 PWID receiving HBV testing, 1,875 returned for their result. HBV vaccination was provided to 1,706 PWID, but only 492 completed all three doses. The needle/syringe exchange and condom distribution services were provided to 2,508 and 2,392 participants, respectively. Education and awareness activities reached 2,840 PWID. At the study’s end, 82 PWID were on antiretroviral treatment. Over the three-year implementation period, costs were USD$1,067,629.88. HIV prevention and care services accounted for around 50 percent of the cost. The authors concluded that providing comprehensive services for PWID is challenging, and requires significant efforts to address uptake and retention of services.

View Full Study

Using Technology to Support HIV Self-Testing among MSM


This review of 15 studies summarized HIV self-testing (HST) technologies that address barriers to HIV testing among men who have sex with men (MSM). Grindr, a geospatial dating application for gay and bisexual men, advertised free HST kits available through a study. Post-test surveys found that most MSM preferred HST over clinic-based testing. HST kits were also reported as easy to use. In China, HST was provided by mail to 198 online survey participants. Participants reported a preference for HST use due to convenience (46%) and privacy (40%); 67 percent said that they would self-test again if it were free. The application, HealthMindr, was developed for MSM and included health self-assessment tools and reminders of HIV service locators, along with access to free condoms and HST. The application was well-received; participants most often used access to free condoms and HST. Pre-test counseling has been provided to MSM via videoconferencing, and peer-based counseling to young MSM via video chat. An application currently under development will provide a "virtual reality experience" for users to improve adolescent HST experiences. Bluetooth® technology is also being applied to HST so when a kit is opened, the user receives a phone call within 24 hours to receive post-test counseling. The authors endorsed using technology that is available in low-resource settings to increase HST globally.

View Abstract

Using a Programmatic Mapping Approach to Plan for HIV Prevention and Harm Reduction Interventions for People Who Inject Drugs in Three South African Cities


This study estimated population size in Cape Town, eThekwini, and Tshwane in South Africa and gathered information about safe injection practices, mobility patterns, and location coordinates of people who inject drugs (PWID). The study team visited injection sites, assessed the availability of HIV
prevention supplies, and conducted interviews with PWID. Participants answered questions about number of daily injection sites visited, their ability to access HIV prevention supplies, and if their health needs were addressed; they also identified the locations of other sites, which the study team later visited. Geospatial mapping identified information about each PWID location and estimated PWID population sizes to determine service needs and routes. In Cape Town and Tshwane, 69 and 37 PWID locations were confirmed, respectively. No clean injecting supplies were available at any location in either city. In both cities 92 percent of PWID identified a nearby pharmacy where injecting supplies could be purchased. In eThekwini, 39 PWID locations were confirmed. Sterile supplies were available at one location and near six others, and 98 percent of PWID were able to identify a pharmacy to purchase clean needles. Across cities, only one-third felt that their health needs were being met. These findings indicated that PWID are accessible and need HIV prevention services, which require significantly more attention and financing.

View Full Study

The Socio-Ecological Model Approach to Understanding Barriers and Facilitators to the Accessing of Health Services by Sex Workers: A Systematic Review


The authors of this review applied the socioecological model to examine behaviors associated with accessing health services among sex workers (SWs) globally. The 30 eligible papers identified barriers at several levels that kept SWs from accessing health services, along with factors that facilitated access at each level:

• **Interpersonal:** *Barriers* included insufficient information, cost, lack of social support, and fears about the consequences of a positive diagnosis. *Facilitators* included health knowledge including the benefits of treatment, perceptions of personal risk, social support, and peer support.

• **Institutional:** *Barriers* included poor perceived quality of care, poor staff attitudes, confidentiality breaches, services that did not attend to their multiple health needs, and inconvenient hours and locations. *Facilitators* included perceived high-quality, convenient, and stigma-free care from health care workers.

• **Community:** *Barriers* included stigma related to HIV, drug use, or sex work. *Facilitators* included nongovernmental advocacy groups that help SWs overcome health access barriers.

• **Policy:** *Barriers* included criminalization and citizenship status requirements. *Facilitators* included government health care subsidies for SWs.

The authors called for interventions to address multilevel barriers and continue developing facilitating elements to improve health care access for SWs.

View Abstract
Acceptability of Woman-Delivered HIV Self-Testing to the Male Partner, and Additional Interventions: A Qualitative Study of Antenatal Care Participants in Malawi


This qualitative study, conducted in anticipation of a randomized controlled trial (RCT) in Malawi, examined perceptions of female-delivered HIV self-testing (HST) kits delivered to male partners during antenatal care. The authors examined perceptions via focus group discussions and in-depth interviews. These discussions identified barriers to HST, including stigma, cost and time requirements, and fear of blame from partner following a positive diagnosis. Both men and women were willing to accept HST kits delivered by pregnant women; they also noted that HST offered privacy for men and addressed the stigma associated with visiting a clinic. Concerns included lack of immediate post-test counseling and the potential for abuse if the partner feels that he was not consulted or that the woman does not trust him. Participants said that the manner in which a woman raised the subject of HST to her partner was critical, and suggested using bedtime or a letter from the clinic to support the discussion. Strategies for increasing HST and linkages included financial incentives, transport costs, lottery, and either text or telephone reminders, although participants preferred the latter, given the increased ability to dialogue. The researchers adapted the upcoming RCT’s methodology to include USD$10 cash or lottery participation as incentives, and telephone call reminders instead of texting.

View Full Study

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Age-Disparate Relationships and HIV Incidence in Adolescent Girls and Young Women: Evidence from Zimbabwe


This study examined the association between HIV incidence in young women aged 15–24 years and participation in an age-disparate relationship. Data were taken from a population study in Manicaland, Zimbabwe, that conducted six surveys, each three years apart, between 1998 and 2013. The findings indicated that 44.5 percent of 3,082 young women surveyed had a partner who was 5–9 years older, and 20.5 percent had a partner at least 10 years older. HIV prevalence in men over 30 was higher than in younger men, and treatment coverage was lower in men age 30–34 than in older men. The greater the age difference between young women and their partners, the higher the risk of HIV infection was for the woman, especially with a male partner more than 10 years older. Older women and educated young women had fewer age-disparate relationships. Women who were poor, married, or divorced were more likely to have age-disparate relationships. There were no changes in HIV incidence over time, as HIV treatment uptake in men remained relatively low throughout the study. As more men achieve viral suppression through increasing treatment uptake, there may be a reduced incidence of HIV infection in young women in age-disparate relationships over time.

View Full Study
A Practical Guide to Implementing Community-Based HIV-Prevention Services

Stellenbosch University, U.S. Centers for Disease Control and Prevention, and United States Agency for International Development (2017).

This guidance document brings together lessons learned from the community-based HIV and tuberculosis program implemented by the Desmond Tutu TB Centre, and provides practical information for others who are establishing community-based HIV prevention services as a component of an integrated public health response. The guide targets a broad audience including program planners, clinicians, monitoring and evaluation personnel, and all stakeholders in the community-based HIV prevention response. The chapters cover:

- **Engaging stakeholders:** Information and tools on engaging stakeholders before and after implementation.
- **Collaborating with nonprofit organizations:** Information and tools on increasing the sustainability of HIV prevention approaches through collaboration.
- **Creating, equipping, and sustaining a team:** Guidance for building an effective team.
- **Delivering holistic client-centered services:** Information and best practices for effective community-based services, including integrated HIV and TB.
- **Linking clients to HIV care and treatment:** Information on linkage challenges for people diagnosed with HIV, and practical information on improving linkages.
- **Providing quality assurance for rapid HIV testing:** Guidance on ensuring quality HIV testing and result sharing in the community setting.
- **Managing data:** Guidance on establishing a high-quality data management system.
- **Monitoring and evaluation:** Guidance on data-gathering and evaluation for HIV prevention services.

Each chapter contains case studies, helpful tips, and links to related websites.

**View Full Guide** (PDF, 11.3 MB)
The AIDSFree Prevention Update provides a representative sample of summaries and abstracts of recent articles on global HIV prevention issues from a variety of scientific, peer-reviewed journals. It also includes program resources, such as tools, curricula, program reports, and unpublished research findings.

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